AllCall 200+ Installation/Operators Manual

Bell System (Telephones) Ltd.

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A200+ Software Version 1.1

Contents

System Description 3
AllCall Amplifier (A200+) 3
KS200+ Unit 3
Emergency Button 3
Multi-controller Systems (GroupMaster 200+ Software) 3
Operating The KS200+ 4
Operation with GroupMaster 200+ Software 4

Cable Requirements 5

Cable Planning 7
Table 1. A200+ Feeder Length (Cores 4 & 5 Diameters) 8
Table 2. KS200+ Branch Length (Cores 1 & 2 Diameters) 8
C200+ to C200+ length (S1, S2 and TL - GroupMaster 200+ Only) 8

Power Supply Rating 9

Installation 10
Cable Entries 10

Important Safety Information (PSU138A-6) 11
Mains Cables (PSU138A-6) 11
Battery 12

System Wiring 13

Commissioning 14
Emergency Tone (C200+ Setup) 14
AllCall Enabled (M200+ Setup) 14
Volume Adjustment (A200+ Setup) 14

Specifications 15
A200+ 15
KS200+ 16

System Description

AllCall Amplifier (A200+)

The AllCall amplifier (A200+) is used to generate an emergency evacuation tone or a general announcement on all room units within an M200+ system.

An additional benefit of the A200+, is that it removes the limit to the number of Monitor stations that can sound alarm tones simultaneously.

The AllCall amplifier is supplied in an IP55 lockable steel cabinet with its own internal power supply (PSU138A-10) and requires a 12V 6AH lead-acid battery. It is intended for occasional use, requiring a battery charge time in between operations.

System Requirements:
C200+ (PCB issue 2.1 or later) fitted with software version 2.1 or later.

M200+'s version 1.0 or later

KS200+ Unit

One or more KS200+ units can be connected to the A200+. The unit has two key switches and a microphone; one keyswitch will operate the emergency alarm, the other is used to make a general announcement with the microphone.

Emergency Button

Emergency button(s) can be used in place of KS200+ units; they will operate the emergency tone only.

Multi-controller Systems (GroupMaster 200+ Software)

Normally each C200+ on the system requires an AllCall amplifier; However, if a C200+ has 20 or less M200+ room units, the AllCall Amplifier may be omitted provided that:-

1. There is at least one AllCall on the system
2. The total number of M200+ room units connected to a C200+'s without an AllCall amplifier is 50 or less.

Operating The KS200+

Operating this key switch will put the system into emergency alarm mode. All M200+ room units on the system will sound an alarm tone.

Operating this key switch will put the system into general announcement mode; by pressing the talk button (on the right of the symbol) and speaking into the grill on the front of the KS200+ unit, the operator can make an announcement to all M200+ room units on the system.

Operation with GroupMaster 200+ Software

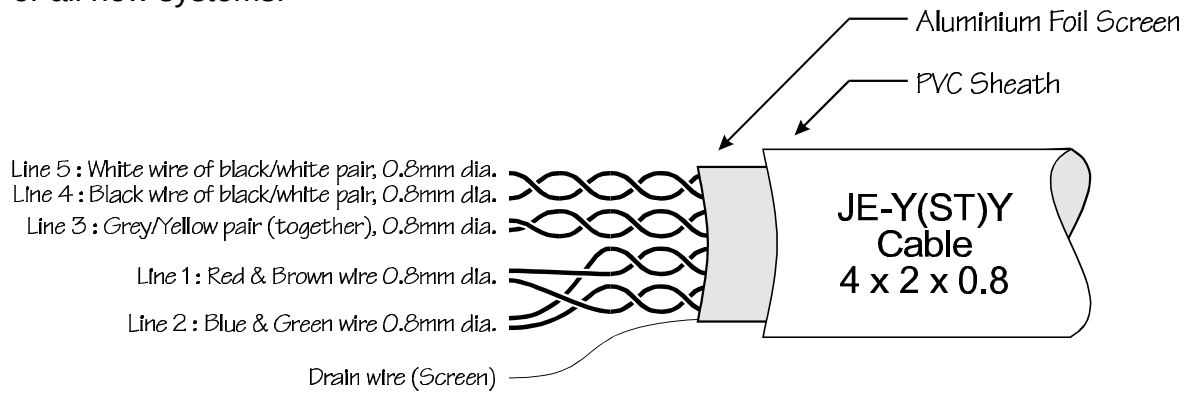
See the GroupMaster 200+ User Manual.

Cable Requirements

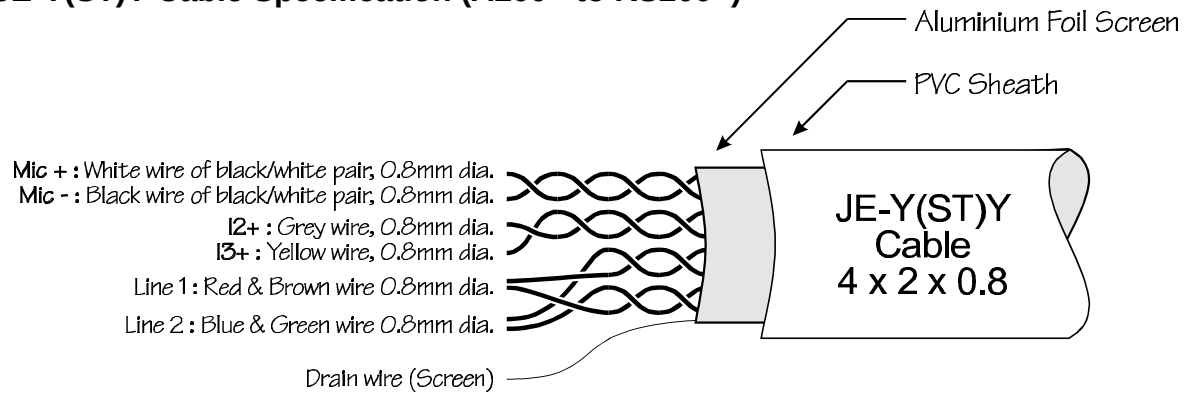
The AllCall amplifier is connected to the rest of the M200+ system using a 5 core cable which carries power, speech and data. The KS200+ is connected to the AllCall amplifier using a 6 core cable.

A single cable of type JE-Y(SY)Y, BSTL 'S6CR' (illustrated below) or equivalent, must be used to ensure correct operation of the system and compliance with European EMC directive (89/336/EEC).

JE-Y(ST)Y Cable Specification (C200+ to A200+)
For all new systems.

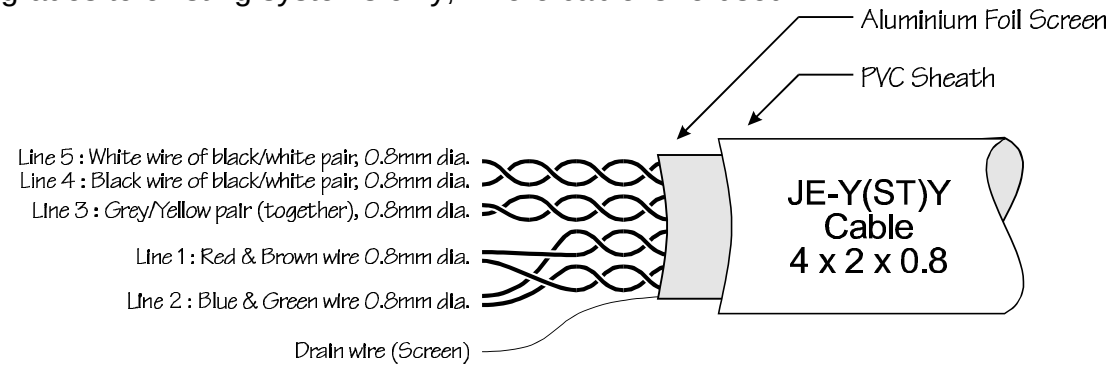

Aluminium Foil Screen
PVC Sheath
Line 5 : White wire of black/white pair, 0.8mm dia.
Line 4 : Black wire of black/white pair, 0.8mm dia.
Line 3 : Grey/Yellow pair (together), 0.8mm dia.
Line 1 : Red & Brown wire 0.8mm dia.
Line 2 : Blue & Green wire 0.8mm dia.
Drain wire (Screen)
JE-Y(ST)Y
Cable
4 x 2 x 0.8

JE-Y(ST)Y Cable Specification (A200+ to KS200+)

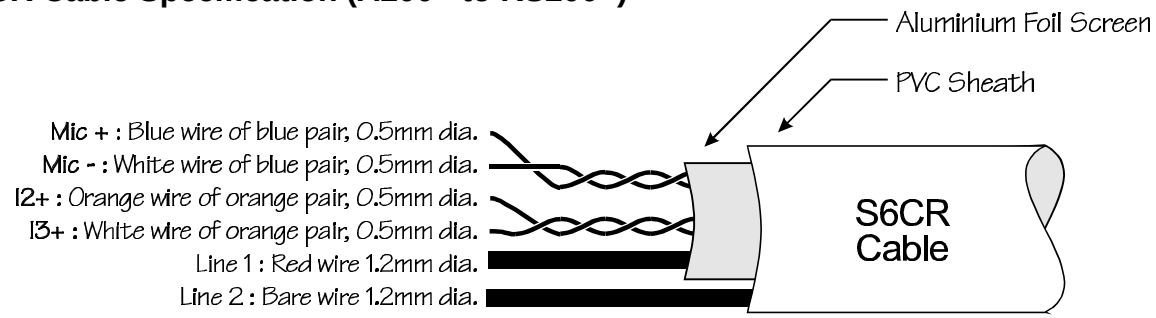

Aluminium Foil Screen
PVC Sheath
Mic + : White wire of black/white pair, 0.8mm dia.
Mic - : Black wire of black/white pair, 0.8mm dia.
I2+ : Grey wire, 0.8mm dia.
I3+ : Yellow wire, 0.8mm dia.
Line 1 : Red & Brown wire 0.8mm dia.
Line 2 : Blue & Green wire 0.8mm dia.
Drain wire (Screen)
JE-Y(ST)Y
Cable
4 x 2 x 0.8

S6CR Cable Specification (C200+ to A200+)

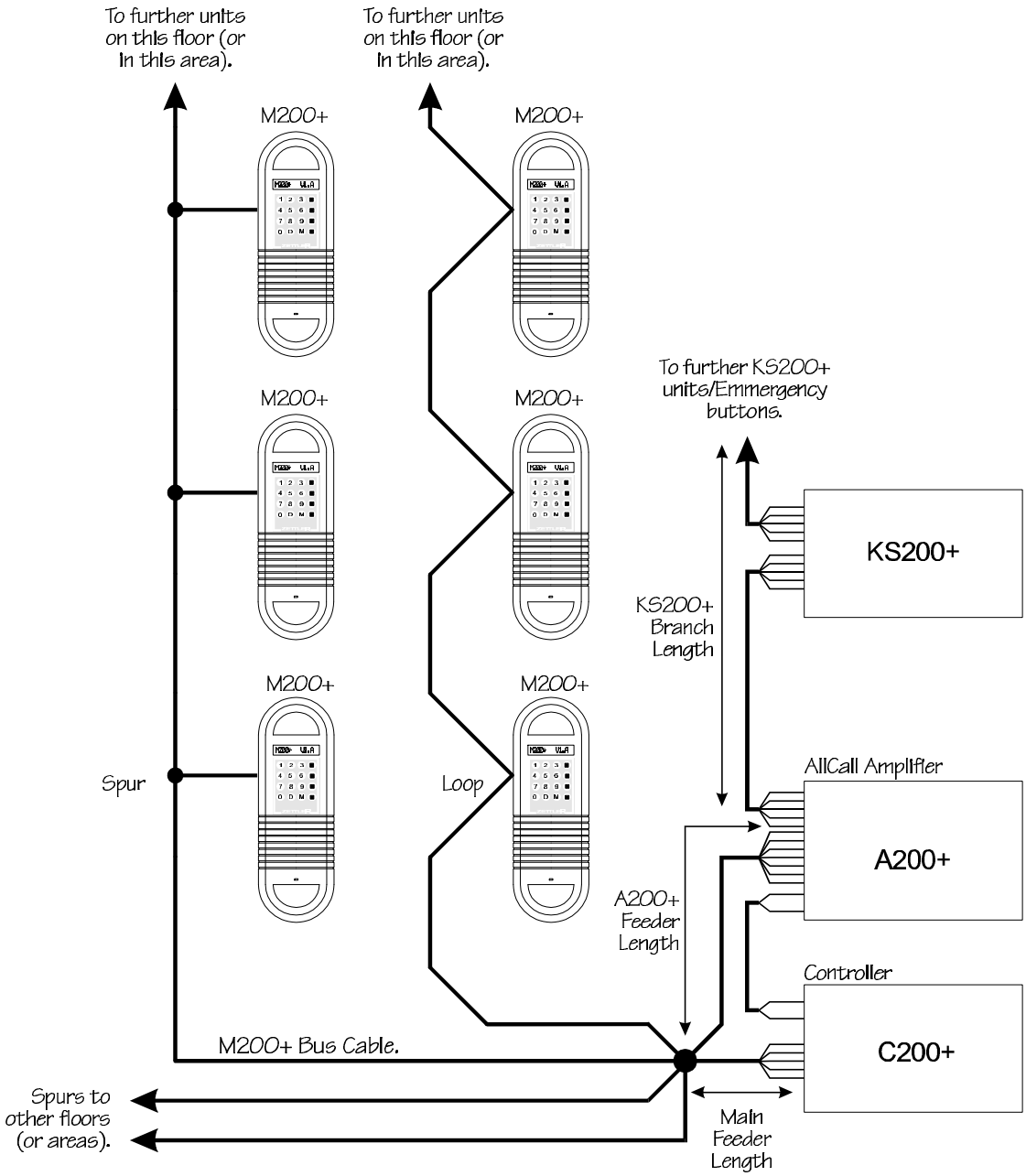
Upgrades to existing systems only, where cable is re-used


Aluminium Foil Screen
PVC Sheath
Line 5 : White wire of black/white pair, 0.8mm dia.
Line 4 : Black wire of black/white pair, 0.8mm dia.
Line 3 : Grey/Yellow pair (together), 0.8mm dia.
Line 1 : Red & Brown wire 0.8mm dia.
Line 2 : Blue & Green wire 0.8mm dia.
Drain wire (Screen)
JE-Y(ST)Y
Cable
4 x 2 x 0.8

S6CR Cable Specification (A200+ to KS200+)


Aluminium Foil Screen
PVC Sheath
Mic + : Blue wire of blue pair, 0.5mm dia.
Mic - : White wire of blue pair, 0.5mm dia.
I2+ : Orange wire of orange pair, 0.5mm dia.
I3+ : White wire of orange pair, 0.5mm dia.
Line 1 : Red wire 1.2mm dia.
Line 2 : Bare wire 1.2mm dia.
S6CR
Cable

Cable Planning



Group the M200+ in floors or areas and run a spur from the junction box to each area.

Main Feeder Length - This length of cable should be a maximum of 1m.

A200+ Feeder Length - The length of this cable should not exceed the maximum specified in table 1.

KS200+ Branch Length - The length of this cable should not exceed the maximum specified in table 2.

Table 1. A200+ Feeder Length (Cores 4 & 5 Diameters)

Cable Used (Cores 4 & 5)	0.5mm Dia.	1mm Dia.
Total M200+ Units on System.	A200+ Feeder Length	
Up to 50	8	35
Up to 100	4	15
Up to 250		5

Note The above table gives the maximum A200+ feeder length, it is advised that this cable length be kept as short as possible.

Table 2. KS200+ Branch Length (Cores 1 & 2 Diameters)

Cable Used	0.5mm Dia.	2 X 0.5mm Dia./1mm Dia.
KS200+ Units	Branch Cable Length	
1	200	400
2	200	400
3	200	400
4	175	350
5	150	300

C200+ to C200+ length (S1, S2 and TL - GroupMaster 200+ Only)

The maximum cable distance between any two C200+'s is:-

Cable Used (Cores S1, S2 & TL)	0.5mm Dia.	1mm Dia.
If all C200+'s have an AllCall amplifier	100m	100m
If C200+'s without AllCall amplifiers are in use	8m	35m

Power Supply Rating

To calculate the power requirement for the A200+ and the M200 system as a whole see M200+ Installation Manual.

Installation

The cabinet must be installed in a protected indoor environment, close to a 240V electrical supply, e.g. an electrical cupboard.

KS200+ units should be located close to where they will be used such as an office or staff room. Care must be taken not to place the KS200+ unit too close to any of the M200+ room units as feedback may result. If this unavoidable, the Allcall feature on the Room Unit in question must be disabled.

Cable Entries

Before any cabling can be carried out the cable entry plate must be drilled and suitable cable glands fitted. To avoid metal fragments entering the cabinet always remove the panel before drilling.

Important Safety Information (PSU138A-6)

Connections to the 240V AC mains supply must be carried out by a qualified electrician or similar competent person, and made in accordance with accepted safety practices. A good mains safety earth must be connected to cabinet and Power Supply (PSU138A-6). A two-pole switch (as provided by a Consumer Unit or Switch-Fuse) must be included to isolate both Live and Neutral during Installation or Maintenance. The circuit must be protected by a current limiting fuse or other device with a maximum rating of 5A.

The transformer is protected by a fuse; always replace this with the correct type and rating:

T315mA 250V (20mm glass fuse, 315mA, 250V, Time delay, approved to BS EN 60127 or equivalent.)

Mains Cables (PSU138A-6)

Use only mains cable to BS6004, BS6500, or equivalent, within the following specified limits:

	Minimum	Maximum
Conductor Diameter	1.0mm (0.75mm^2)	2.25mm (4mm^2)
Cable Diameter	4.0mm	8.0mm

When fitting the cables to the PSU138A-6 (both primary and secondary) only feed them through the blind grommets provided, first cutting a slit in each. Do not remove the grommets or make any other holes.

Battery

The PSU requires a sealed lead-acid battery rated at 12V 6AH (YUASA NP6-12). The battery is an essential part of the AllCall amplifier and must be fitted on all systems.

To avoid build up of explosive gases do not block any vents on the cabinet which maybe apparent.

Care must be taken to ensure the battery terminals are not shorted together by metal objects as this may constitute a Fire Hazard.

Observe the correct polarity when connecting:

Red wire - Positive (+)

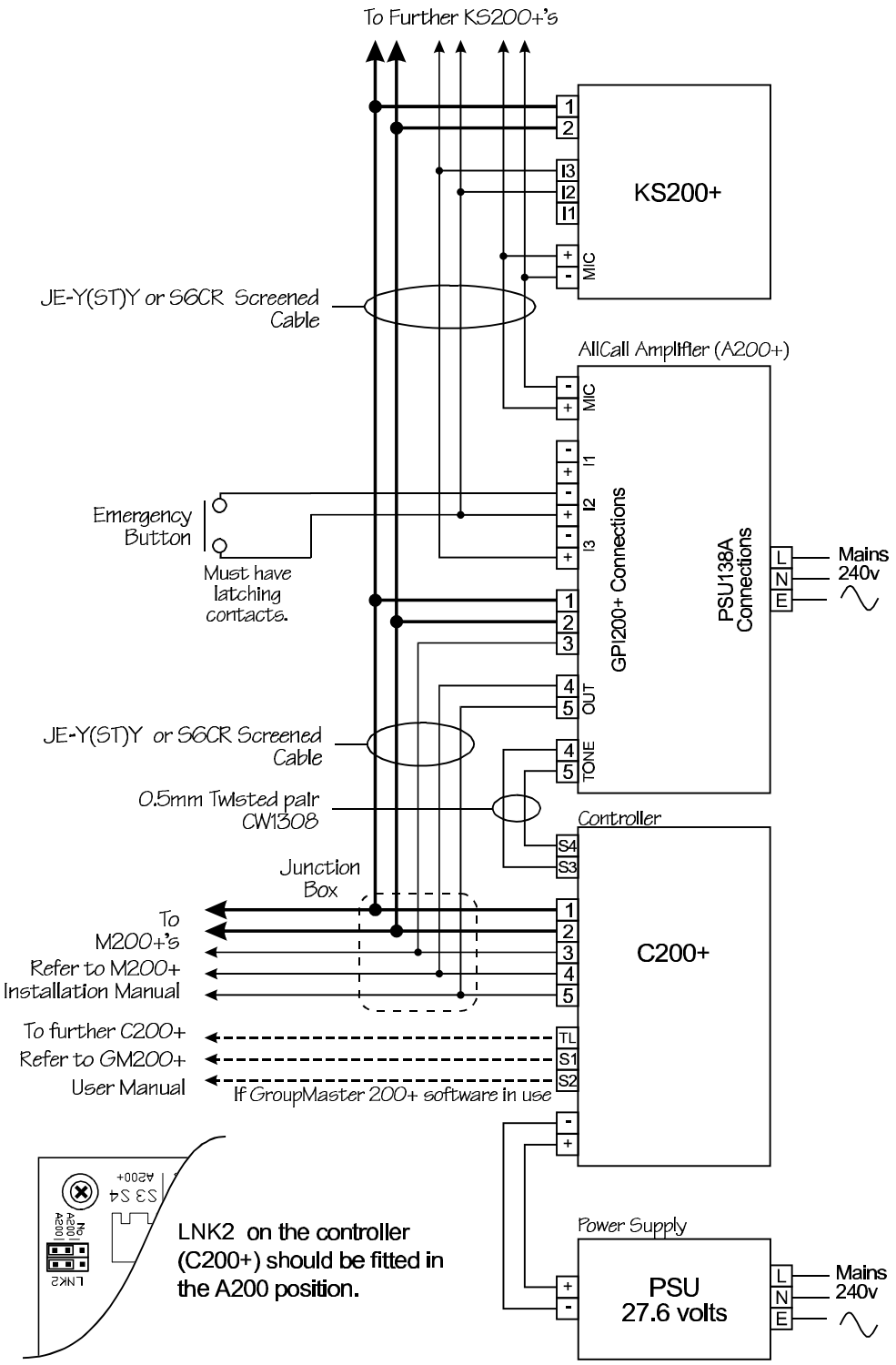
Black wire - Negative (-)

The Battery is protected by a fuse, always replace this with the correct type and rating:

F6.3A 250V (20mm glass fuse, 6.3A, Fast Blow, approved to BS EN 60127 or equivalent.)

Note The battery is normally shipped separately.

System Wiring



Commissioning

Emergency Tone (C200+ Setup)

can be set to a variety of different tones and duty rates (On/Off times) to the emergency tone from other alarm tones. The tone is setup using the setup software(V1.4 or later), see the M200+ Installation manual for details of

AllCall Enabled (M200+ Setup)

is a M200+ Room unit parameter that controls the speaker in a room unit when the system is active, normally this should be set to **ON** and only changed to on located close to the KS200+ unit to eliminate unwanted audio feedback. For

Volume Adjustment (A200+ Setup)

emergency tone volume adjustment is on the C200+ (VR1) and this should be set

There
SPEECH VOL) these should normally be set to maximum.

Specifications

A200+

GPI200+

Supply Voltage	(Maximum)	28V D.C.
	(Minimum)	18V D.C.
Supply Current	(Maximum)	175mA
Size	Height	500mm
	Width	400mm
	Depth	155mm
Weight		19Kg

Amplifier

Supply Voltage		12v D.C.
Output		75W Can drive 250 M200+

PSU138A-6

Supply Voltage		230V∿ ± 10%
Output Voltage		13.5V D.C.
Charging Current	(Maximum)	1Amp

KS200+

Supply Voltage	(Maximum)	28V D.C.
	(Minimum)	18V D.C.
Supply Current	(Maximum)	50mA
Size	Height	220mm
	Width	160mm
	Depth	65mm
Weight		700g

Bell System (Telephones) Ltd reserves the right to change these specifications without notice.

CE Products comply with EMC directive 89/336/EEC on Electromagnetic Compatibility and Low Voltage Directive 72/23/EEC

Standards

Emissions:	Generic BSEN50081-1
Immunity:	Generic BSEN50082-1 (IEC801-2, IEC801-6)
Low Voltage:	Generic BSEN 60950